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LETTER TO THE EDITOR

Paramedian pons infarction with wall-eye monocular internuclear ophthalmoplegia syndrome

To the Editor,

Wall-eye monocular internuclear ophthalmoplegia (WEMINO) is a lacunar infarction syndrome presenting with transient hemi-seesaw nystagmus.

We present a 47-year-old woman, who suffered from sudden onset of left hemifacial numbness, double vision, mild dysarthria, and unsteady gait after dinner. The first neurologic examination was performed about 16 hours after onset of symptoms. Right exotropia with adduction paralysis and hemi-seesaw nystagmus associated with left hemifacial paresthesia were noted. Romberg test was negative but obvious ataxic gait was noted during the first visit, and her dysarthria was resolved a few hours after the examination. Brain magnetic resonance imaging was performed 24 hours after onset of symptoms (Figures 1A and 1B), where an acute infarction in the right upper paramedian pontine tegmentum, just adjacent to the forth ventricle, in the area of the medial longitudinal fasciculus (MLF), and ventrally extended about 9 mm outward was noted. The magnetic resonance angiography (Figure 1C) showed neither focal stenosis nor occlusion in bilateral vertebral arteries and basilar artery. Her right eye adduction paralysis improved 36 hours after onset, and all the symptoms were resolved 60 hours after onset of symptoms.

WEMINO is a rare variant of internuclear ophthalmoplegia involving the MLF, and present with ipsilateral exotropia [1–5]. Hemi-seesaw nystagmus will be noted when the interstitial nucleus of Cajal is involved [3,4]. Our patient's left hemifacial numbness was due to the involvement of trigeminothalamic tract, where the nerve fiber is efferent from the left principle sensory nucleus of the trigeminal nerve. This nerve fiber decussating just before entering the right medial lemniscus, which is

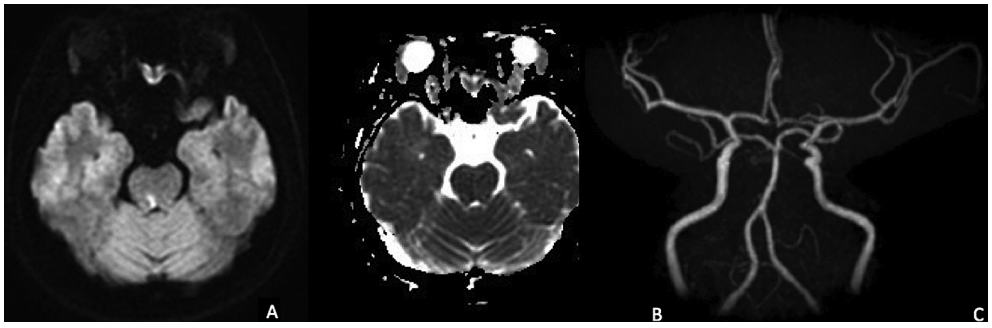

Figure 1. Magnetic resonance imaging and angiography performed 24 hours after symptoms onset. (A) Diffusion-weighted imaging shows a high signal intensity in the right upper paramedian pontine tegmentum adjacent to the forth ventricle and (B) apparent diffusion coefficient shows low signal intensity in the same location, compatible with acute infarction. (C) Magnetic resonance angiography shows no obvious luminal narrowing or focal stenosis in intracranial arteries.

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ipsilateral to the lesion site, then goes into the thalamus [1]. Dysphagia is due to the supranucleus tract of hypoglossal nerve lesion. Left side ataxic gait was due to the involvement of the right medial lemniscus after it decussates at the medulla. The symptoms of WEMINO can be resolved from as soon as 36 hours or can last to 7 weeks [1—5].

In conclusion, we have presented a case with isolated paramedian pontine infarction and multiple cranial nerves involvement. The right internuclear ophthalmoplegia, hemi-seesaw nystagmus, left facial paresthesis, dysphagia, and ataxic gait, were due to the involvement of the MLF, interstitial nucleus of Cajal, trigeminothalamic tract, supranuclear tract of hypoglossal nerve, and ipsilateral medial lemnisus, respectively. The transient neurological symptoms will lead to misdiagnosis if there is a delay in seeking medical treatment.

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You-Chia Chen
Department of Neurology, Shuang Ho Hospital, Taipei Medical University, Taipei, Taiwan

Lung Chan*
Department of Neurology, Shuang Ho Hospital, Taipei Medical University, Taipei, Taiwan

Department of Neurology, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan

Shiau-Shan Cho
Wei-Ting Chiou
Tzu-shiang Ko
Chaur-Jong Hu
Department of Neurology, Shuang Ho Hospital, Taipei Medical University, Taipei, Taiwan

*Corresponding author. Department of Neurology, Taipei Medical University and Taipei Medical University-Shuang Ho Hospital, 291 Zhongzheng Road, Zhonghe District, New Taipei City, 235, Taiwan.
E-mail addresses: 12566@s.tmu.edu.tw, cjustinmd@gmail.com (L. Chan)